

REMARKS

Claims 1-22 are pending in this application. Claim 21 has been canceled and the subject matter thereof has been incorporated into claims 1 and 13.

1. Drawings

The Office Action Summary indicates that the Examiner has approved the proposed drawing correction submitted on March 17, 2003. Applicant hereby submits a formal drawing for Figure 1 and respectfully requests that the corrected formal drawing be approved and made a part of the record of the above-identified application.

2. Claim Objections

Claims 6 and 8 have been objected to as being in improper multiple dependent form. Applicant has amended claim 6 to recite a method according to "any one of claims 1-5". Applicant believes that this amendment obviates the objection to claims 6 and 8 and respectfully requests that the objection be reconsidered and removed.

3. Claim Rejections under 35 U.S.C. §112, second paragraph

The Examiner has rejected claim 15 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicant regards as the invention. Specifically, the Examiner states that claim 15 is indefinite because "said gas inlet chamber (15)" lacks proper antecedent basis in claim 13. The Examiner also notes that the term "the cyclone separation chamber" lacks proper antecedent basis in claims

13 and 14. Applicant has amended claim 15 to depend from claim 14 in order to provide proper antecedent basis support for the term “gas inlet channel”. Applicant did not find the term “the cyclone separation chamber” in claim 15 and therefore did not understand the Examiner’s exact concern. Applicant respectfully requests clarification of this particular indefiniteness rejection. Applicant believes that the remaining indefiniteness rejection has been overcome by the above-described amendment and requests reconsideration and removal of the rejection.

4. Claim Rejections under 35 U.S.C. §102(b)

The Examiner has rejected claims 1-3, 11-16 and 19 as being anticipated by Davenport et al. (US. 2,553,175). The Examiner has considered Applicant’s arguments to distinguish over the Davenport reference, specifically the fact that the instant invention is operated under overpressure conditions and that the Davenport reference does not include vanes, but was not persuaded as these limitations were not contained within the claims. The Examiner has appeared to accept Applicant’s argument that the bent openings of Davenport cannot be considered vanes. Moreover, the Examiner explicitly acknowledges that Davenport does not disclose the use of guide vanes of e.g. claims 17 and 18. Applicant has amended the independent apparatus and method claims to further specify that the multiple-inlet cyclones have straight guide vanes. This feature is not disclosed by Davenport. As such, Davenport cannot be held to anticipate the pending claims. Reconsideration and removal of the anticipation rejection over Davenport is respectfully requested.

5. Claim Rejections under 35 U.S.C. §103(a)

The Examiner has issued two obviousness rejections. In the first rejection, the Examiner has rejected claims 4, 5, 7, 9, 10 and 20 as being obvious over Davenport. In the second rejection, the Examiner argues that claims 17 and 18 are obvious in view of Davenport and DE 914701. Applicant respectfully traverses.

With respect to the first rejection, Applicant would like to point out that the Examiner's rejection is improper as a matter of law. On page 5, in paragraph 2, the Examiner acknowledges that the Davenport reference fails to teach more than one of the claimed features. Yet, the Examiner goes on to argue that it would have been obvious to a person of ordinary skill in the art to modify the process of Davenport to incorporate these claimed elements to arrive at the present invention. However, the Examiner fails to cite to any secondary reference or other teachings to support his argument. This is *per se* improper. To establish a *prima facie* case of obviousness, the Examiner must establish three basic criteria. First, there must be some suggestion or motivation in the reference itself or in the knowledge generally available to the skilled artisan to modify the reference. Second, there must be a reasonable expectation of success. And, third, the prior art reference must teach all the claimed limitations. MPEP 2143 citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). A statement that modifications to meet the claimed invention would have been "well within the ordinary skill of the art at the time the claimed invention was made" is not sufficient to establish a *prima facie* case of obviousness. The Examiner is required to identify the disclosure within the reference or references which teach all of the claim elements and which provide the motivation to combine the references in the manner

suggested to arrive at the claimed invention. This the Examiner has not done. Accordingly, Applicant is not required to submit arguments to establish the non-obviousness of the rejected claims in view of the single reference, Davenport. Reconsideration and removal of the rejection is respectfully requested.

In the second obviousness rejection, the Examiner cites two references, Davenport and Klug (DE 914701), to reject claims 17 and 18 as obvious. Klug describes a dust-separator which comprises a plurality of parallelly fitted separation tubes. These tubes do not correspond to the multi-inlet cyclones of the present invention. Yet, Klug is cited for teaching the "guide vanes in a cyclonic separator" missing from the Davenport reference. The Examiner argues that it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process and apparatus of Davenport by including the guide vanes of Klug because efficient separation of solids from gas will be achieved. Applicant disagrees.

A person of ordinary skill in the art reading the Davenport and Klug references would not be motivated to make the modification proposed by the Examiner. This is because the Davenport method has been designed to work in a vacuum. Dust is removed by gravitation from the cyclones. The cyclone would not work if turned upside down as in the Klug apparatus. In that case, the dust would mix with the clean exhaust gas. Thus, Applicant submits that a person of ordinary skill in the art would not apply the teachings of the Klug reference with those of the Davenport reference. Reconsideration and removal of the rejection is requested.

Favorable consideration and early allowance of all the claims is requested.

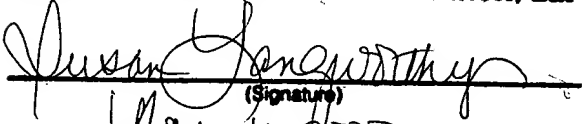
Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Leonard R. Svensson (Reg. No. 30, 330) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Pursuant to the provisions of 37 C.F.R. § 1.17 and 1.136(a), Applicant hereby petition for an extension of one (1) month to November 8, 2003 for the period in which to file a response to the Office Action dated July 8, 2003.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, postage prepaid, in an envelope to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on: 11/10/2003
(Date of Deposit)

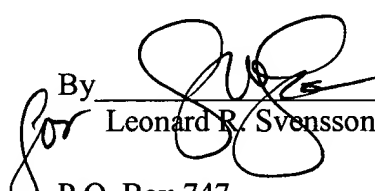
BIRCH, STEWART, KOLASCH & BIRCH, LLP


(Signature)
Nov 10 2003
(Date of Signature)

LRS/KR/sml
0365-0494P

Respectfully submitted,

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Attachment(s): Formal Drawing (Fig. 1)

(Rev. 09/30/03)